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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,602	03/08/2001	Petrus Hubertus Maria America	NL 000121	5313

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EXAMINER
VU, TUAN A

ART UNIT	PAPER NUMBER
2124	5

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/801,602	AMERICA, PETRUS HUBERTUS MARIA	
	Examiner	Art Unit	
	Tuan A Vu	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the application filed March 8, 2001.

Claims 1-8 have been submitted for examination.

Foreign priority papers have been filed and acknowledged.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a " useful, concrete, and tangible result" be accomplished. An "abstract idea" when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a "useful, concrete and tangible result".

Claims 1 and 7 are rejected for leading to a non-statutory subject matter.

Claim 1 is a method step but most of the recited elements do not amount to a step action to be taken for implementing the recited method in the preamble; because as recited, it appear as though those elements amount to descriptive material without any functions or without being embodied in a computer as computer-readable medium. Therefore, the claim recites only an abstract idea.

Claim 7 is rejected under 35 U.S.C. 101 because as claimed, a family of medical imaging systems does not provide any functions or action steps as to yield a concrete, useful and tangible result. Hence, the claim only recites an abstract idea and is thus non-statutory.

Information Disclosure Statement

3. The information disclosure statement filed 3/18/2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

More specifically, only 1 of 3 non-patent literature items of the IDS has been considered. The items tagged as 'NC' and identified as "AM" and "AN" in the 'OTHER' section of form PTO-1449 are not provided with a copy and thus not considered. Examiner's attempt to retrieve these copies from the online databases failed to obtain these items. In order for these items to be considered, Applicant is urged to send in a copy for each of these items.

Specification/Abstract

4. The abstract of the disclosure is objected to because of the following: the abstract presents a format which is not complying to the requirements that no more than one paragraph should cover the whole abstract content and that the length of the paragraph should be confined within a 150-words limit. Further, the 'No figure' phrase at the very bottom should not be part of an abstract. Correction is required. See MPEP § 608.01(b).

Claim Objections

5. Claims 2, 3, 5 and 8 are objected to because of the following informalities:

The reciting of the acronym 'FRS' has to provide a spell-out of the acronym at least once (see claims 2, 5).

As for claim 3, there is misuse of capitalization in '-Different …' as start of lines 4, 5, 7 of the claim.

As for claim 8, there appears to be a typo error in 'Claim 1a' (line 1); and should be 'Claim 1' instead. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 2, 4, and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite because the claims pertain to a method claim (claim 1, 7) whereas the elements in the body in the claim are such that they appear as more of structural elements than functional steps implementing the method claim.

For example, the limitations like 'set up of a functional requirements' (claim 1 – line 3) suggest not an action taken to further limit the developing of a complex system of the preamble; but appear more like structural elements when step actions are expected from a method claim listing as is the case. Further, the reciting step actions by 'a model control team' or 'teams are formed' (claim 2); or 'team … is constructed' or 'fine tuning' (claim 4), for example, are steps that are not part of a method listing that is expected to be set in the base method claim from which these actions depend.

The reciting of 'complex systems' (i.e. complex with regard to what reference) and the lack of action to include or comprise in claim 7 with respect to the rest of the claim body appear indefinite for not pointing out the metes and bounds of the claim.

Claim 7 is not only founded on idiomatic constructs but also does not recite what is included or excluded. Therefore the scope of the claim cannot be determined so as to conduct a prior rejection based on the merits of the claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-5, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin et al., USPN: 6,199,195 (hereinafter Goodwin), in view of Saint-Marcel et al., "The Invoicing System in UML", March 26, 1998, IMAG, International Workshop, Nantes (hereinafter St-Marcel).

As per claim 1, Goodwin discloses a method for developing a family of complex systems having a common software architecture platform, the method comprising:

set up a functional requirements specification (e.g. e.g. *complex business framework, behaviors within a composed service framework, logical models*- col. 2 line 64 to col. 3, line 25; col. 6, lines 29-46 – Note: modeling of interacting objects in logical models is equivalent to set up functional requirement specifications) that describes interaction of users with said complex systems in terms of abstract concepts (e.g. *templates, UML* - col. 4, line 1 to col. 5, line 35; *class definition, metadata* - col. 12, line 49 to col. 13, line 5; *meta model* – col. 11, lines 36-47 – Note: UML implies graphical establishing of logical interactions describing functional requirements of objects in the system in terms of roles and users);

set up a requirements object model which explains the abstract concepts in terms of structured vocabulary (Fig. 3,4,5).

But Goodwin does not explicitly disclose set up of functional requirements specification including use cases; nor does Goodwin disclose use cases being developed hand-in-hand with the requirement object model even though Goodwin disclose Rational Rose/UML as modeling and adapting tool (col. 11, lines 2-16). It is well known that Rational Rose is a middleware tool to adapt/map user-specified object interaction (i.e. requirement of business logic) from a design/logical model to reusable data or object-oriented objects, such building of requirement being mostly founded on use cases analysis. Hence, it can be implied that Goodwin has disclosed hand-in-hand specification of object model and use case analysis; because if not, the technique as to associate use case with Goodwin's requirement modeling would be obvious because of the above recognition. St-Marcel, in a method to determine a business system's functional requirements analogous to Goodwin's, discloses requirement capture using use cases (e.g.ch. 3, 4). In case Goodwin does not provide use case analysis in setting up requirements object model, it would have been obvious for one of ordinary skill in the art at the time the invention was made to implement the requirements object model by Goodwin using hand-in-hand with Use Cases as taught by St-Marcel, because each use case represents an aspect among more complex business patterns or families of business logic; and modeling one such logic with Use Case analysis as taught by Rational Rose and St-Marcel would enhance the business template/logical model approach by Goodwin to address complex business system, one of such complex system being evidence by the invoice system of St-Marcel.

As per claim 2,Goodwin discloses complex business system and a plurality of developers, models and templates (col. 5, line 66 to col. 6, line 46) and management of the life-cycle of the project (e.g. col. 7, line 23 to col. 8, line 5); and further discloses one or more templates to represent a chapter for which specific use cases are constructed with UML constructs and object/class definition (see claim 1; Fig. 3-7 - Note: each set of template for a specific business framework functionality is equivalent to a chapter being developed by a team), i.e. one or more chapters and object model team to control consistency of the model requirement; and construct use cases (see claim 1) with respective portions of structured vocabulary (i.e. UML specifications, IDE). But Goodwin does not explicitly disclose requirement authoring teams and forming of overlapping modeling teams.

Official notice is taken that managing a software project using developing teams with overlapping responsibilities (members of team being used in other teams), from requirement analysis, authoring, to design evaluation, implementation, test scenarios and verification, change reviews and traceability analysis, was a well-known concept at the time the invention was made. Collaborations between use cases being specified by different authors are known in tools like Rational Rose or the likes, thus suggesting overlapping and integrating of separately authored Use cases as mentioned by Goodwin and St-Marcel. Hence, in case Goodwin does not provide overlapping teams for authoring requirement specification and modeling of such requirements and for handling specific ones of the chapters, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide teams for modeling and for authoring requirements so that members of modeling (e.g. object model control team) teams cooperate with members of the requirement authoring team as taught by common practice as

mentioned above. The motivation would be to enable repartition of resource/responsibilities and specialization of domain knowledge as well as knowledge sharing; hence facilitate supervision and interdependency control and/or concurrent development conflict resolution; all of these concepts being integrated in to the common overlapping team concept as mentioned above.

As per claim 3, Goodwin discloses expressing differences in each family of complex system, using: different members of a family of enterprise of systems (e.g. *a business framework* - col. 2 line 64 to col. 3, line 25; col. 4, line 1 to col. 5, line 36; col. 6, lines 29-46; *scalable* – col. 5, line 66 to col. 6, line 9) using different subclasses of a generalized class, different members of a family using multiplicities in relationships between classes; members of family using different values for an attribute of a class (see Goodwin: *Java class 60*, Fig. 6 -- Note: this is implicitly disclosed in the object-oriented nature of Java class definition and object and Class-encapsulated properties/attribute instantiation for code development, e.g. inheritance, methods polymorphism or overwriting, private/public properties, encapsulation and reuse).

As per claim 4, Goodwin discloses initial model to which authoring process is performed and fine tuning of such initial model (e.g. *source model* - Fig. 5; *loop through classes* – Fig. 6) is performed by a object model control team. Even though Goodwin does not explicitly disclose use cases being authored on the basis of the initial model; but in view of Goodwin's using of Rational Rose (col. 11, lines 2-16) and the rejection in regard to Use Cases as set forth in claim 1, this limitation has been addressed, if not saying that it is implicitly disclosed that Goodwin's Rational Rose tool does start with a highest level Use Case from which different members of requirement team further derive sub use cases.

As per claim 5, Goodwin does not explicitly that authoring of use cases is carried out in parallel by respective requirement authoring teams. The concept of parallel developing of software and concurrent authoring of model specification by more than one developer in frameworks such as Goodwin's using UML or Rationale Rose was a known concept in the art of using Unified Modeling Language which has been designed for such concurrent use of users operating from separate and heterogeneous development environments. Hence, Goodwin in combination with St-Marcel as set forth in claim 1, has implicitly disclosed concurrent authoring of models by development team members.

As for claim 8, Goodwin in combination with St-Marcel discloses object model expressing difference in behaviour of use cases among family of systems; and different subclasses of general class; different multiplicities of relationships, or different values of attributes; all these limitations are implicitly disclosed in use case modeling by Rational Rose/UML (see claim 1) and in object-oriented code generation derived on such modeling (see claim 3).

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin et al., USPN: 6,199,195 (hereinafter Goodwin), in view of Saint-Marcel et al., "The Invoicing System in UML"; as applied in claim 1 (for claim 6), and further in view of Langlotz, USPN: 6,366,683 (hereinafter Langlotz).

As per claim 6, Goodwin discloses that complex systems are medical or hospital related application frameworks (col. 4, lines 6-20; col. 5, lines 1-10) but does not specifically discloses use case and subsets of use cases being used to support a family of medical imaging systems. In a system using modeling language (UMLs – col. 2, lines 32-46) to specify an instance of

medical application similar to the suggestion by Goodwin, Langlotz discloses the medical system is radiology-related and imaging system (Fig. 1-2). Since medical imaging is but one of many medical diagnostic or hospital applications, it would have been obvious for one of ordinary skill in the art at the time the invention was made to implement one of the business or medical system frameworks as suggested by Goodwin so that a medical imaging or any medical diagnostic application using modeling as taught by Langlotz be one of such frameworks, because of the relationships among information data as depicted by Langlotz's medical radiology imaging system would be more enhanced for better analysis and reusability when modeling is used.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat No. 6,523,027 to Underwood, disclosing multi-team development and data reconciliation and Rational Rose integration.

U.S. Pub No. 2002/0046394 to Do et al., disclosing multi-tiered development with UML and requirements matrix analysis.

Terry Quatrani, "Visual Modeling with Rational Rose and UML", April 1998, Addison-Wesley, disclosing Use cases and modeling teams.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (703)305-7207. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for formal communications intended for entry)

or: (703) 746-8734 (for informal or draft communications, please label

"PROPOSED" or "DRAFT" – please consult Examiner before use)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA. , 22202. 4th Floor(Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

VAT
April 4, 2004

TODD INGBERG
PRIMARY EXAMINER